



# Literal Equations and Formulas

Solve for  $x$  and indicate any restrictions on the values of the variables.

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25.  $bx + a = dx + c$

26.  $cx - b = ax + d$

27.  $6bx + c = 2c - 3bx$

28.  $8cx - e = 3e + cx$

29.  $a(x - 3) + 8 = b(x - 1)$

30.  $c(x + 2) - 5 = b(x - 3)$

31.  $a(3tx - 2b) = c(dx - 2)$

32.  $b(5px - 3c) = a(qx - 4)$

33.  $\frac{1}{x} = c + \frac{1}{b}, x \neq 0, b \neq 0$

34.  $\frac{1}{x} = c - \frac{1}{a}, x \neq 0, a \neq 0$

Solve each formula for the indicated variable. Indicate any restrictions on the values of the variables.

35.  $R(r_1 + r_2) = r_1 \cdot r_2$ , for  $r_2$

36.  $R(r_1 + r_2) = r_1 \cdot r_2$ , for  $R$

37.  $h = vt - 5t^2$ , for  $v$

38.  $v = s^2 + \frac{1}{2}sh$ , for  $h$

## Applications

12. Geometry The surface area  $S$  of a rectangular solid is given by the formula  $S = 2(lw + wh + lh)$ , where  $l$ ,  $w$ , and  $h$  represent the length, width, and height of the rectangular solid, respectively. Solve for  $l$ .

## MIXED PRACTICE

Solve for the indicated variable. Indicate any restrictions on the values of the variables.

17.  $P = 2(l + w)$ , for  $w$

18.  $ax + c = j$ , for  $x$